

U.S. EPA Comments – Draft Work Plan for A-12 Pit Surface Water Diversion
Report submitted by Golder Associates, Inc., dated February 26, 2020
Comments dated March 26, 2020

Section 2.2, third paragraph, first sentence. EPA agrees that upgradient spring-fed ponds are the main sources of water to the A-12 pit. However, we suspect there is also subsurface groundwater flow from upper ponds that will not be intercepted by proposed surface water diversion alternatives and continue to feed A-12 Pit. Pipeline invert elevations in the Upper Pond set at Elev 5740 will maintain a year-round reservoir water surface that will continue to feed Pond 2 and the A-12 Pit. Pond 1 has separate drainage area not included in Figure A – Drainage Area. Therefore Pond 1 will continue to feed Pond 2 and the A-12 Pit. The volume of subsurface groundwater flow has not been determined and would require a field investigation to measure the transmissivity of soils below the Upper Pond and between the Upper Pond and the lower ponds. EPA believes the A-12 project will meet its stated objective of diverting surface water flows around contaminated soils. That is useful and worthwhile, but additional work may be needed to address subsurface flows. Post-construction monitoring will be important to measure the impact of the project on contaminant loading to the A-12 pit.

Section 2.2, third paragraph, fourth sentence. Please provide the invert elevation of the CMP pipe that currently carries overflow from the Upper Pond to Pond 1.

Section 4.0, last sentence. The analysis considered a 25-year, 24-hour storm event. Provide justification for this selected design criteria.

Section 4.1, first paragraph. The basis for choosing a pipe, a rock-lined ditch, and an unlined ditch should be described here. Is slope the defining factor that dictates the type of infrastructure? If so, what are the cutoff points? For example, if slope is >5% use pipe, between 2% and 5% use lined ditch and <2% use unlined ditch. This could make sense but doesn't appear to be the case – if anything, the ditch appears to be steeper than the pipeline based on the profile provided on Figure 4. If the defining factor is the potential for the water to pick up contaminants or for infiltration to generate contaminated shallow groundwater, soil contamination data in each of the three sections should be summarized and references provided to the relevant data report(s). Same comment applies to Section 4.2.

Section 4.1, third paragraph, second sentence. Identify minimum cover over HDPE pipe at maintenance road crossings.

Section 4.1, fourth paragraph, third sentence: Rock-lined ditch to include “geotextile” – woven or unwoven? Geotextile class? Was consideration given to lining ditch to prevent stormwater infiltration into ground and reduce seepage into A-12 Pit?

Section 6.0. What was the justification for maintaining the 2-foot freeboard for 50-year event and not 100-year event?

Figures 5. In general, EPA prefers Alternative B because of the relatively straight alignment. However, we are worried about the section of pipe proposed to run west / northwest along the road separating the Upper Pond from the lower ponds. It appears the pipe would then cross another road before heading west and into the ditch at the eastern end of the railroad tracks. Are these roads still in use? If yes, will the pipe be buried beneath the roads and is there any concern for heavy vehicle traffic over the pipe crossings?

Figure 7. Details should also be provided for the pipe inlet, the ditch outlet at Dry Hollow, and the transition points from pipe to rock-lined ditch and rock-lined ditch to unlined ditch. There is no typical cross section for the unlined ditch, which the text says will be “upgraded.” How deep will it be? Will the soil be compacted? Slope of sides? Also, a typical detail for a pipe clean-out should be provided.

Appendix A. The photos are very helpful. Please add photos of the discharge point in Dry Hollow and the receiving water (stream?) downgradient. Photos of the existing ditch that will be upgraded would also be helpful.

Appendix B. Do the calculations all assume no snow (only rainfall on bare or vegetated ground)? If yes, the size of a 25-year event could be greater than predicted. A rain-on-snow event should be considered, if it can be modeled.

Appendix B. If this project is constructed, what will happen during a storm that exceeds the modeled event? Could the overflow damage the new pipe and ditch alignment, wash out the road, or cause erosion in the HQ area?